

6. (Twice Amended) An optical disk recording device for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk via a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

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a tracking signal generating section that sequentially outputs a detected tracking error signal during a particular period when a recording pulse signal is in an OFF state or no pit is being formed, and that, during a period other than said particular period, either holds a level of the tracking error signal detected immediately before said period or outputs a zero-level tracking error signal, said tracking signal generating section smoothing the tracking error signal to thereby provide the smoothed tracking error signal as a tracking signal;

an offset imparting section that imparts an offset to the tracking signal;

a storage section that stores information indicative of optimum offset values corresponding to various possible recording conditions; and

a control section that reads out one of the optimum offset values corresponding to current recording conditions and sets the offset, to be imparted by said offset imparting section, to the read-out offset value, and performs tracking control using the tracking signal having the offset imparted thereto, wherein the read-out offset value is set so that a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is canceled and the pit is accurately formed on a center line of the track.

7. (Twice Amended) An optical disk recording device for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk via a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

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a tracking signal generating section that sequentially outputs a tracking error signal during a particular period from a given time point within a recording signal ON period after formation of a pit is initiated in response to turning on a recording pulse signal and a reflection of the light beam from the optical disk passes a peak level to a subsequent time point when the recording pulse signal is next turned on, and that, during a period other than said particular period, holds a level of the tracking error signal detected immediately before said period, passes through the tracking error signal for a recording signal OFF period, or outputs a zero-level tracking error signal, said tracking signal generating section smoothing the tracking error signal to thereby provide the smoothed tracking error signal as a tracking signal;

an offset imparting section that imparts an offset to the tracking signal;

a storage section that stores information indicative of optimum offset values corresponding to various possible recording conditions; and

a control section that reads out one of the optimum offset values corresponding to current recording conditions and sets the offset, to be imparted by said offset imparting section, to the read-out offset value, and performs tracking control using the tracking signal having the offset imparted thereto,

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wherein the read-out offset value is set so that a tendency towards formation of the pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is canceled and the pit is accurately formed on a center line of the track.

New independent claim 13 has been added as follows:

13. (New) An optical disk method for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk via a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, wherein tracking control is performed in such a way that a center of an optical axis of the light beam is offset, by a predetermined amount, from a center line of the track toward the outer circumference of the optical disk, the predetermined amount being so that a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is canceled and the pit is accurately formed on the center line of the track.